



## DATASHEET Lighting Solutions

### PE1000DF and PE1000DUV CERMAX<sup>®</sup> XENON SHORT-ARC LAMPS



## CERMAX

#### Key Features

- High-intensity illumination – 24000 Lumens
- Power range of 850-1050 Watts
- 1000 hours life
- Broad spectral range with 5900° Kelvin color temperature
- Made in the U.S.A.

#### Applications

- Medical and industrial fiber optic illuminators
- Machine vision
- Infrared and visible spotlights/beacons
- Spectroscopy
- Microscopy
- UV Curing
- Video projection
- Solar simulation
- Wafer inspection

*Cermax<sup>®</sup> Xenon short-arc lamps from Excelitas Technologies are ideal for applications that require a high degree of illumination control.*

The Cermax<sup>®</sup> Xenon short-arc lamp from Excelitas Technologies is an innovative lamp design in the specialty lighting industry. Cermax<sup>®</sup> Xenon lamps were first introduced in the early 1980s and are now used in diagnostic and surgical endoscopes in most major hospitals worldwide, in high-brightness projection display systems, and for a variety of other high-performance applications.

Cermax<sup>®</sup> Xenon lamps, Models PE1000DF and PE1000DUV, have an integrated parabolic reflector, enabling high-intensity, focused output of visible and infrared radiation. With their internal reflector and rugged ceramic body construction, Cermax<sup>®</sup> Xenon lamps are the safest and most compact alternative to conventional quartz xenon lamps. This makes them ideal for applications requiring a high degree of illumination control.

Current-regulated or power-regulated power supplies with output ripples of less than 5% are recommended. Single-shot ignition pulses are advised because radio frequency starters may damage the lamp's internal reflector.

In addition to lamps, Excelitas Technologies manufactures Cermax<sup>®</sup> Xenon short-arc lamp power supplies, lamp holders, OEM lighting systems, and fiber optic light sources.

## EXCELITAS TECHNOLOGIES

[www.excelitas.com](http://www.excelitas.com)

## PE1000DF and PE1000DUV CERMAX® XENON SHORT-ARC LAMPS

### PE1000DF and PE1000DUV

Operational Specifications		
Description	Nominal	Range
Power	1000 Watts	850-1050 Watts
Current	51 amps (DC)	46-54 amps (DC)
Operating Voltage	19.5 volts (DC)	18.5-22 volts (DC)
Ignition Voltage	28-35 kilovolts (system dependent)	
Temperature	150° C (Maximum)	
Lifetime*	1000 hours typical	

\* End of life is defined as 50% of initial output

Initial Output at Nominal Power		
F= UV Filtered Output    UV = UV Enhanced Output		
Description	PE1000DF	PE1000DUV
Peak Intensity	38x10 <sup>5</sup> candelas	27x10 <sup>5</sup> candelas
Radiant Output*	250 Watts	250 Watts
UV Output*	13 Watts	25 Watts
IR Output*	137 Watts	133 Watts
Visible Output*	24000 Lumens	22000 Lumens
Color Temperature	5900° Kelvin	5050° Kelvin
Peak Instabilities	6%	
Beam Geometry**	7°/8°/9°	

\* These values indicate total output in all directions. Wavelengths = UV<390 nm, IR>770 nm, Visible: 390 nm-770 nm

\*\* Beam Geometry defined as the half angle at 10% PTS after 0/100/1000 hours

Physical Specifications	
Description	Specification
Weight	680 grams
Window Diameter	2.0 inch (50.8 mm)

## PE1000DF and PE1000DUV CERMAX® XENON SHORT-ARC LAMPS

### Focused Output with f/1.0 Lens

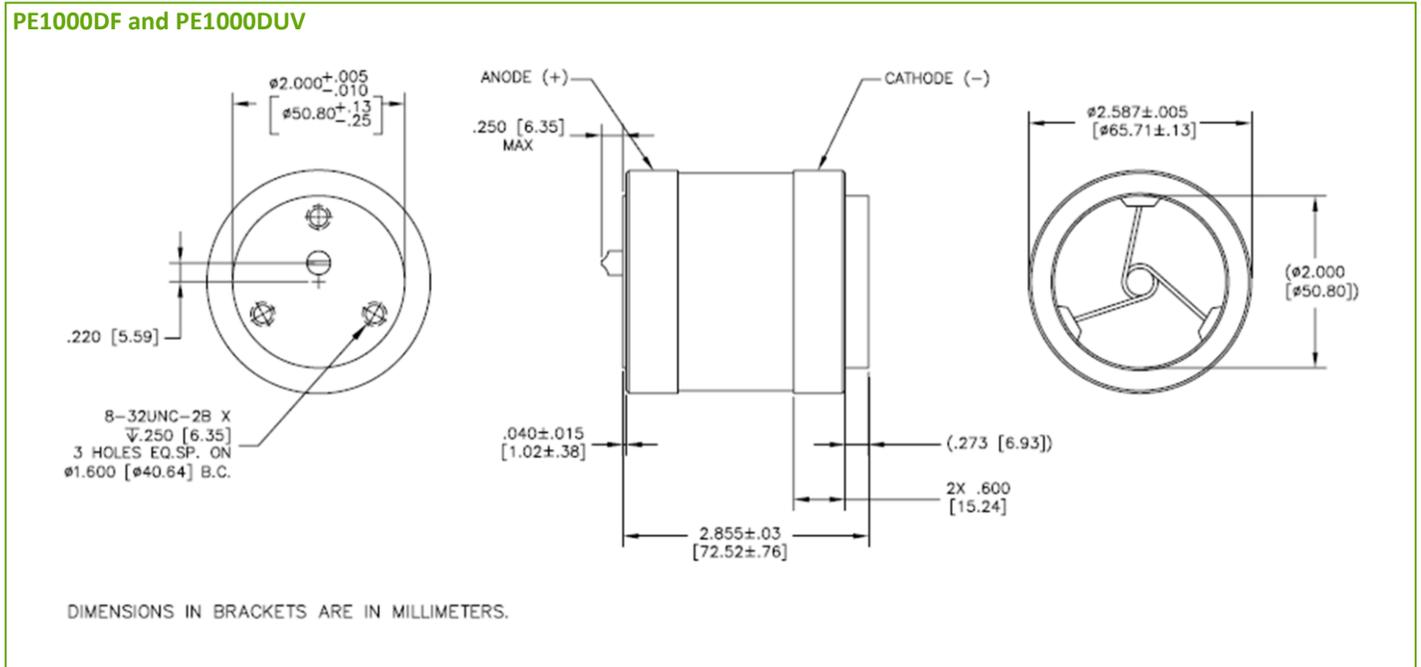
Description	Visible Output	Total Output*
3 mm aperture	4600 Lumens	44 Watts
6 mm aperture	10400 Lumens	96 Watts

\* Nominal values at 1000 Watts after 2 hour burn-in.

### NOTES:

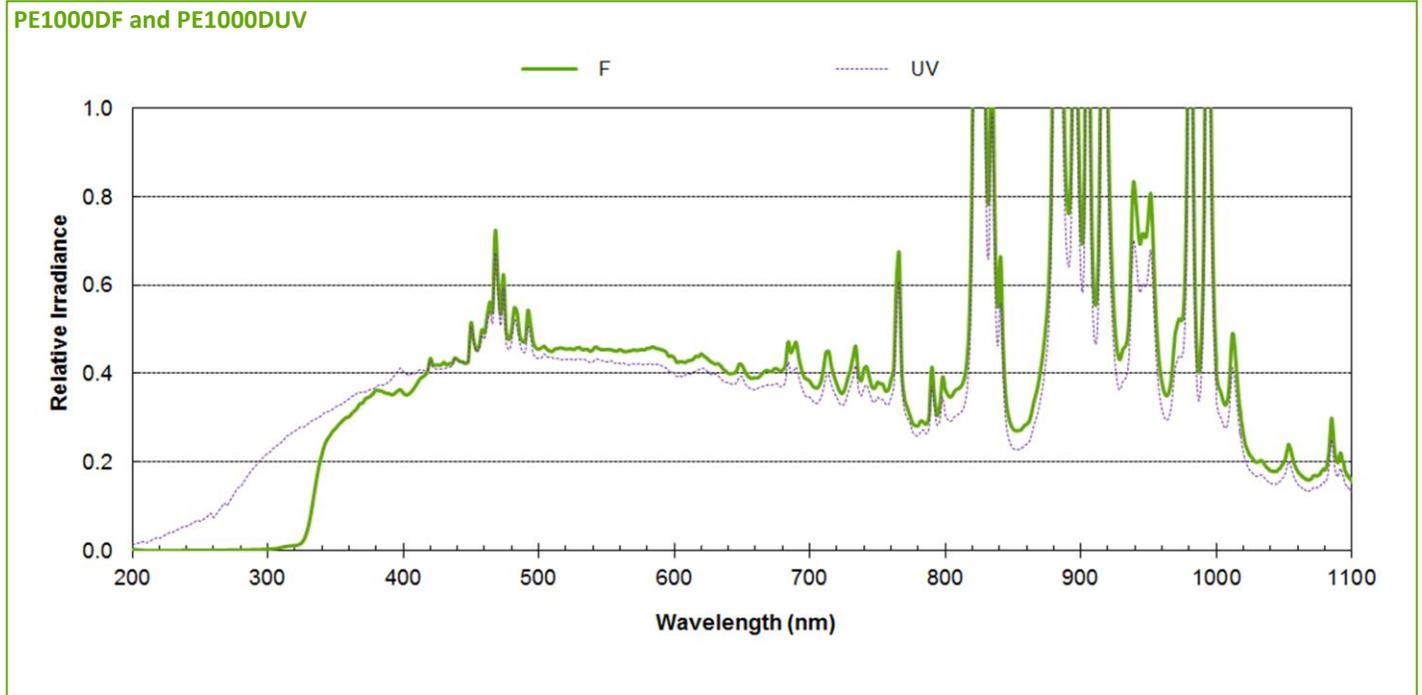
1. Lamp must not be operated with window facing upwards within 45° of vertical.
2. Seal temperature must not exceed 150° C.
3. Current/power regulated power supplies and Excelitas lamp housing units are recommended.
4. Lamp must be operated within recommended current and power range. Over powering may lead to arc instability, hard starting and premature aging.
5. Cermax® Xenon lamps are much safer lamps to use than their quartz xenon arc lamp equivalents. However, caution must be practiced when operating lamps because they are under high pressure, require high voltage, reach temperatures up to 200° C, and their IR and UV radiation can cause skin burns and eye damage. Please read the Hazard Sheet included with each lamp shipment.

### Mechanical Dimensions



## PE1000DF and PE1000DUV CERMAX® XENON SHORT-ARC LAMPS

### Spectral Output



### About Excelitas Technologies

Excelitas Technologies is a global technology leader focused on delivering innovative, customized solutions to meet the lighting, detection and other high-performance technology needs of OEM customers.

From medical lighting to analytical instrumentation, clinical diagnostics, industrial, safety and security, aerospace and defense applications, Excelitas Technologies is committed to enabling our customers' success in their specialty end-markets. Excelitas Technologies has approximately 3,000 employees in North America, Europe and Asia, serving customers across the world.

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